

REMARKS

This responds to the Office Action mailed on March 13, 2008.

Claims 1 and 41 are amended, claim 35 is canceled, and no claims are added; as a result, claims 1-28, 36-39 and 41 are now pending in this application.

Claim Objections

Claim 40 was objected to as being of improper dependent form for failing to further limit the subject matter of a previous claim. The subject matter of Claim 40 has been incorporated into Claim 1 and Claim 40 has been canceled.

Double Patenting Rejection

Claims 1-4, 6-13 and 35-41 were provisionally rejected under the judicially created doctrine of double patenting over claims 1-13 of co-pending Application Number 10/780,968 (2269.028US1) in view of either McLean (U.S. Patent No. 6,969,563) or (E.P. 1,202,365).

Previously co-pending Application Number 10/780,968 (2269.028US1) has been abandoned and it is therefore requested that the Double Patenting Rejection be withdrawn.

§112 Rejection of the Claims

Claim 35 was rejected under 35 U.S.C. § 112, first paragraph, as lacking adequate description or enablement. Claim 35 has been canceled.

Claim 41 was rejected under 35 U.S.C. § 112, first paragraph, as lacking adequate description or enablement. Applicant respectfully disagrees that Claim 41 lacks adequate description or enablement. Paragraphs [0058-0059] of the present application describe two examples of ionic bonding and current Claim 41 specifically describes that the bonding occurs between the electrodes and electrolyte. At least paragraphs [0033-0034] in discussing Figure 1 describe the contact between the electrolyte and electrodes. One skilled in the art would be able to utilize the description in paragraphs [0058-0059] to recognize the ionic interactions of the electrodes and electrolyte.

Claim 41 was rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. After the amendment to Claim 1, current Claim 41 has proper antecedent basis for “the one or more electrodes.”

§103 Rejection of the Claims

Claims 1, 3-4, 6-13, 35-38 and 40-41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kiefer, of record, in view of (E.P. 1,202,365).

Present Claim 1 describes how the electrolyte is “disposed within one or more channels of the electrochemical cell, in which one or more electrodes are in contact with the one or more channels”. The Examiner cites the EP 1,202,365 application (‘365 reference) as showing this embodiment. The ‘365 reference does not disclose this element and therefore a *prima facie* case of obviousness has not been established. On page 15 of the Office Action, the Examiner states that the electrolyte is disposed within channels of the *substrate* of ‘365 (emphasis added). The electrolyte of present Claim 1 is disposed within the channels of the *electrochemical cell*. The substrate of ‘365 is porous and acts as a structural support for the electrolyte. The electrolyte is held in the pores of the substrate. The substrate, impregnated with the electrolyte, is disposed between electrodes in the ‘365 reference. In contrast, the present application describes porous gas diffusion electrodes (paragraph [0047]), but not a porous material including an electrolyte acting as a structural support between electrodes.

The ‘365 reference does not disclose an electrolyte disposed within channels in contact with one or more electrodes. Further, one skilled in the art would not look to the porous substrate of ‘365 to create the disposed electrolyte in channels of the present invention. Figure 2 of ‘365 displays the porous structural substrate in contrast to the channels of Figs. 2-3 of the present application.

Claim 1 states that the electrolyte composition is disposed within one or more channels of the electrochemical cell. As previously discussed, the Kiefer reference is an example of a traditionally produced electrolyte formed into a “sheet.” The electrolyte compositions of Kiefer are not disposed within one or more channels of an electrochemical cell, nor are they contemplated to be cured *in situ*.

Neither the Kiefer reference, nor the ‘365 reference disclose electrolyte compositions disposed within one or more channels of an electrochemical cell, nor are they contemplated to be

cured in situ. One skilled in the art would not be driven to combine the Kiefer and '365 references as to produce embodiments of the present invention, as Kiefer relies on traditional sheet electrolyte architecture and the '365 simply describes a porous substrate for supporting an electrolyte. The deposited and cured electrolyte found in electrochemical cell channels of the present invention can not be created by combining these references. The Examiner has not made out a *prima facie* case of obviousness as not all elements of the claims are found in the references, nor is a motivation to combine the references shown.

As it is believed Claim 1 is in allowable condition, the remaining rejected dependent claims are believed to be in allowable condition as they depend directly or indirectly from Claim 1. Applicant respectfully requests a withdrawal of the obviousness rejection.

Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kiefer or in view of (E.P. 1,202,365) as applied to claim 1 above, and further in view of Singleton (U.S. 5,425,687).

Claim 39 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kiefer in view of (E.P. 1,202,365) as applied to claim 38 above, and further in view of Murata (U.S. 5,902,876).

As it is believed Claim 1 is in allowable condition, Claims 2 and 39 depend directly or indirectly from Claim 1 and therefore believed to be in allowable condition as well. Applicant respectfully requests a withdrawal of the obviousness rejection.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.116 – EXPEDITED PROCEDURE

Serial Number: 10/781,363

Filing Date: February 18, 2004

Title: ELECTROCHEMICAL CELL AND FUEL CELL WITH CURABLE LIQUID ELECTROLYTE

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Dkt: 2269.027US1

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney 612-373-6920 to facilitate prosecution of this application.

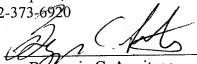
If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date: May 20, 2008

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: MS AF Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 20th day of May 2008.

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Signature